Safety Management:

ArchitektonikiDomi Ltd

Name: **Name of the Author**

Student ID:

Course:

Institute:

Word Count:

Date:

Table of Contents

Introduction

The Organizational Health and Safety (OHS) Act, 1995 requires all organizations to carry out a risk assessment before making an intervention. Risk assessment requires the risk to health and safety to be controlled so far as is reasonably practical. The purpose of this report is to spell out safety management alternatives and recommendations for a hypothetical construction company ArchitektonikiDomi Ltd. The scope of risk assessment will be limited to site layout, protective equipments of workers and noticeable health and safety hazards at the workplace.

Background Information

ArchitektonikiDomi Ltd is a private construction company in Athens, Greece. On April 11, 2009, it undertook construction of a five-storey multi-flat building. The building scheme consisted of a rectangular basement, ground floor, single flat on first floor, single flat on second and third floors and a smaller flat on fourth floor. The objectives of the scheme in terms of Time limits, Cost limits and Quality requirements have been set out. However, some concerns regarding the safety management at the worksite remains.

Approach to Risk Assessment

The first step in safety management is carrying out risk assessment under OHS guidelines (Burke, 2004)

Identification of Hazards

Several hazards were identified by the author in the given case study

Inflammable materials: The presence of several inflammable or combustible sources like welding tools, torches or even cigarettes can cause a fire or explosion at the construction site. A fire can not only affect those present on the site, but also those who are outside as the site

is located at the heart of the city by causing serious damage to bodily systems like liver, lungs, or skin inflammation.

Noise levels: The noise from the trucks and other construction equipments cause a lot of noise pollution at the construction site. Noise can be irritating for the construction workers and can cause loss of hearing which can increase heart beat and stress levels in humans which can negatively impact the health of the workers at the site (Kogi, 2006).

Bird drops: The construction site attracts a lot of pigeons. The bird excrement is identified as a major hazard to the health of all those present at the construction site. Even though personal protective equipments (PPE) like facemasks with filter are mandatory for the workers and visitors, they are not completely fool-proof as workers are often observed to remove their PPE during breaks. The birds' faeces often contain *Cryptococcus neoformans,* a fungus which can cause infection of the lungs (CCPS, 2005). Thus, the workers are exposed to a serious health hazard.

Eating area: The eating area which contains clean drinking water is at a considerable distance from the construction site. This has been done to avoid possible contamination of food and water which can compromise the health of the workers. However, in summer months when the temperatures can soar to 40 degree Celsius, travelling in heat can cause unconsciousness and even heat stroke to the workers (OHS Australia, 2009). So, the distance of eating area can be a health hazard during summer months.

Risk Evaluation

A risk matrix is used to evaluate the seriousness and likelihood of each risk. The rating for Likelihood and Seriousness for each risk is done in the following matrix. The hazards are rated on the basis of previous records available and author's own experiences with these

hazards (Table 1). In the risk matrix, the recommended actions for various grades of risk are given according to OHS regulations (Table 2).

Existing Safety Measures

Before spelling out the recommendations for the construction site, it is important to examine the existing safety management measures

No-Smoking zone: The construction site is strictly a no-smoking zone. There is a designated smoking zone for workers who want to light a cigarette. In case a fire does occur, there are numerous fire extinguishers available at accessible places. The workers are trained in use of these fire extinguishers so that they can control minor fires. The fire alarm is audible to every place at the site and the fire station is located nearby. The evacuation drills of the workers are conducted regularly in case of an emergency. This shows that the existing control measures are reasonable.

Use of PPEs: The workers involved in welding and torching are required to wear facemasks and ear plugs at all times which can reduce the effect of noise. Other employees are also provided with appropriate PPE so that no permanent long term effects of noise are encountered. The machines are oiled regularly so that the noise level is kept to a minimum. However, noise has to be considered an occupational hazard for a construction site which cannot be completely done away with. Thus the existing control measures are adequate so far as reasonably practical.

Bird repellers: ArchitektonikiDomi Ltd. uses bird repellent techniques like spray to drive away the birds at the site. However, these are only used at the ground level. It is not economically feasible to use these sprays at the roof which has become a hub of pigeons. The faeces of these pigeons cause foul smell and mess at the construction site. It is not cleaned

regularly which means that the workers are always at the risk of coming in contact with the fungi which can cause lung infection. This shows a deficiency in existing control measures which can be improved upon.

Eating area: The eating area is separated from the construction site so as to prevent possible contamination of dust particles with the food or water. The workers are expected to take a shower before they enter the main eating area though it is not mandatory. During summer months, when it is very hot, there is no arrangement for cold drinking water or glucose water at the site itself. This can cause dehydration or even unconsciousness under extreme hot conditions. The control measures are clearly not adequate and must be improved upon.

Recommendations

The following safety management measures are recommended

Bird shield techniques: The bird repellent sprays are not feasible at heights as their effect is very short lived. A shield can be more effective at repelling the pigeons. This will reduce the bird faeces and thus reduce the risk of lung infection for the workers. Moreover, the ground level must be regularly cleaned so as to prevent the foul smell to cause a nuisance among the workers. This will reduce the risk to health of the workers.

Moving vehicle for cold water/ glucose: The impact of unavailability of cold drinking water or glucose nearby has to be observed over a period of time as it is relatively low level risk. If unfavourable incidences like dehydration or unconsciousness among workers increases over time, action has to be taken. The action can include providing bottled mineral water or glucose to each worker which they can carry with them. Alternatively, a moving vehicle can be allotted for drinking purpose which can reduce the need to travel long distance to fetch cold water under extremely hot conditions.

References

Burke, R. (2004). *Project Management: Planning and Control Techniques.* London: John Wiley.

CCPS. (2005). *Building Process Safety Culture: Tools to enhance process safety performance.* New York: Center for Chemical Process Safety of the American Institute of Chemical Engineers.

Kerzner, H. (2005). *A Systems Approach to Planning, Scheduling and Controlling.* London: John Wiley.

Kogi, K. (2006). Participatory methods effective for ergonomic workplace improvement. *Applied Ergonomics, Vol. 37, Issue 4* , 547-554.

Office of the Queensland Parliamentary Counsel. (1995). *Workplace Health and Safety Act 1995.* Queensland: State of Queensland.

OHS Australia. (2009). *Occupational Health and Safety: Risk Management*. Retrieved May 21, 2010, from http://www.ohsaustralia.com.au/about_us.htm

Swinburne. (2010). *OHS Policy & Procedures*. Retrieved June 15, 2010, from Swinburne University of Technology Web site: http://www.swinburne.edu.au/corporate/hr/ohs/policies.htm

Appendices

Table 1: Rating for Likelihood and Seriousness of Risk

Rating for Likelihood and Seriousness for each risk			
L	Rated as Low	E	Rated as Extreme (Used for Seriousness only)
M	Rated as Medium	NA	Not Assessed
H	Rated as High		

Table 2: Risk matrix

Grade: Risk Matrix					
	Seriousness				
Likelihood		**Low**	**Medium**	**High**	**Extreme**
	Low	**N**	**D**	**C**	**A** Fire or Explosion
	Medium	**D** Distance of Eating area from site	**C**	**B** Extreme noise	**A**
	High	**C**	**B** Bird faeces	**A**	**A**

Table 3: Recommended Actions

Recommended actions for grades of risk	
Grade	**Risk mitigation actions**
A	Mitigation actions, to reduce the likelihood and seriousness, to be identified and implemented as soon as the project commences as a priority.
B	Mitigation actions, to reduce the likelihood and seriousness, to be identified and appropriate actions implemented during project execution.
C	Mitigation actions, to reduce the likelihood and seriousness, to be identified and costed for possible action if funds permit.
D	To be noted - no action is needed unless grading increases over time.
N	To be noted - no action is needed unless grading increases over time.